

## ABSTRACT OF THE DISCLOSURE

Signal channels are identified easily by uniquely correlating the port numbers of the optical time-  
5 division-demultiplexing unit with channel numbers. The extraction apparatus includes an optical time-division-demultiplexing unit that separates multiplexed signals into N channels and provides them to N separate ports, a channel extraction unit that is  
10 connected to N separate ports and extracts one channel number of the N channels, a channel switch that switches the N channels to the output ports of which port numbers uniquely match with the numbers of the N channels based on the relationship between the number  
15 of the one channel extracted and the output port number corresponding to the one channel number, and a data output unit that has N output ports and provides the signals of the switched N channels to the output ports of which port numbers match with the channel  
20 numbers.